

What is claimed is:

1. A radio communication apparatus for radio-communicating with another radio communication apparatus, comprising:

5 frame setting means for setting a frame period and a slot as predetermined time units;

receiving slot setting means for setting at least one receiving slot among receiving slots received during said frame period;

10 notification means for notifying information of said receiving slot via a beacon signal; and

slot increasing means for increasing receiving slots, if receiving a signal from another radio communication apparatus at said receiving slot.

15 2. A radio communication apparatus for radio-communicating with another radio communication apparatus, comprising:

receiving means for receiving a beacon signal from another radio communication apparatus;

20 receiving slot detection means for detecting a receiving slot of said other radio communication apparatus from said received beacon signal; and

slot increasing means for increasing receiving slots at a timing that does not coincide with the receiving slots detected by said receiving slot detection means.

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3. A radio communication apparatus for radio-communicating with another radio communication apparatus, comprising:

frame setting means for setting a frame period and a slot as predetermined time units;

30 receiving slot setting means for setting a plurality of receiving slots received during said frame period;

notification means for notifying information of said receiving slot set by said setting means via a beacon signal; and

slot decreasing means for decreasing said plurality of receiving slots to a minimum of one, if there is no signal reception from another radio communication apparatus at said receiving slot set by said setting means.

4. A radio communication apparatus for radio-communicating with another radio communication apparatus, comprising:

receiving means for receiving a beacon signal from another radio communication apparatus;

receiving slot detection means for detecting a receiving slot of said other radio communication apparatus from said received beacon signal; and

transmitting means for transmitting information via a new receiving slot if a change occurs at said receiving slot, after information is transmitted against a receiving slot of said other radio communication apparatus.

5. A radio communication apparatus for radio-communicating with another radio communication apparatus, comprising:

frame setting means for setting a frame period and a slot as predetermined time units;

receiving slot setting means for setting at least one receiving slot among receiving slots received during said frame period; and

notification means for notifying information of said receiving slot set by said setting means via a beacon signal; wherein

said notification means notifies a reception acknowledgement if receiving a signal from another radio communication apparatus at said receiving slot set by said setting means via a beacon.

6. A radio communication method for performing radio communication between a plurality of radio communication apparatuses, the method comprising the steps of:

5       setting a frame period of predetermined time through a radio communication apparatus;

          preparing a slot of predetermined time unit during the frame period set in said setting step;

          setting at least one receiving slot through each of said radio communication apparatuses; and

10       increasing one's own receiving slots, if there is reception at said receiving slot set in said setting step.

7. A radio communication method for performing radio communication between a plurality of radio communication apparatuses, the method comprising the steps of:

          setting a frame period of predetermined time through a radio communication apparatus;

          collecting a beacon from another adjacent radio communication apparatus through a receiving operation performed throughout said frame period set in said setting step;

20       storing receiving slot information of said other adjacent radio communication apparatus from said beacon; and

          increasing one's own receiving slots at a timing that does not coincide with said receiving slots stored by said storing step.

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8. A radio communication method for performing radio communication between a plurality of radio communication apparatuses, the method comprising the steps of:

30       setting a frame period of predetermined time through a radio communication apparatus;

          preparing a slot of predetermined time unit during the frame

period set in said setting step;

setting a plurality of receiving slots for data reception through each of said radio communication apparatuses; and

5 decreasing one's own receiving slots to a minimum of one, if there is no reception by said receiving slots set in said setting step.

9. A radio communication method for performing radio communication between a plurality of radio communication apparatuses, the method comprising the steps of:

10 setting a frame period of predetermined time through a radio communication apparatus;

collecting a beacon from another adjacent radio communication apparatus through a receiving operation performed throughout said frame period set in said setting step;

15 storing receiving slot information of said other adjacent radio communication apparatus from said beacon;

receiving a beacon signal from a radio communication apparatus if information is transmitted by a receiving slot of said radio communication apparatus; and

20 transmitting information via another receiving slot, if a change occurs in an allocation of a receiving slot.

10. A radio communication method for performing radio communication between a plurality of radio communication apparatuses, the method comprising the steps of:

25 setting a frame period of predetermined time through a radio communication apparatus;

preparing a slot of predetermined time unit during the frame period set in said setting step;

30 setting at least one receiving slot through each of said radio communication apparatuses;

notifying a position of said receiving slot set in said setting step via a beacon; and

notifying reception acknowledgement, if receiving a signal from another radio communication apparatus.

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11. A computer-readable program for executing a process of radio communication with another radio communication apparatus on a computer system, the program comprising the step of:

10 increasing receiving slots, if there is reception in at least one receiving slot set by one's own radio communication apparatus.

12. A computer-readable program for executing a process of radio communication with another radio communication apparatus on a computer system, the program comprising the step of:

15 decreasing receiving slots to a minimum of one, if there is no reception at any receiving slot set by one's own radio communication apparatus.

20 13. A computer-readable program for executing a process of radio communication with another radio communication apparatus on a computer system, the program comprising the step of:

transmitting information via another receiving slot, if a change occurs in an allocation of a receiving slot of a receiving radio communication apparatus.

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14. A computer-readable program for executing a process of radio communication with another radio communication apparatus on a computer system, the program comprising the step of:

30 notifying reception acknowledgement, if a signal from another radio communication apparatus is received at a receiving slot set by one's own radio communication apparatus.